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EXAMINER

BULLOCK JR, LEWIS ALEXANDER

ART UNIT PAPER NUMBER

2195

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/964,148

Applicant(s)

HAHN ET AL.

Examiner

Lewis A. Bullock, Jr.

Art Unit

2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.  
2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-8,10-13,15-19,21-24,26-30,32 and 33 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1,2,4-8,10-13,15-19,21-24,26-30,32 and 33 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 25 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 101*

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 2, 4, 6-8, 10-13, 15, 17-19, 21-24, 26, 28-30, 32 and 33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1, 2, 4, 6-8, 10, and 11 all detail a method for allocating computer system resources wherein the resources are components of a single computer system.

However, there is no statutory teaching or manipulation as proper under M.P.E.P. 2106 for the method claims that would make it statutory. All of the cited limitations are software instructions which can be written out with paper and pencil, thereby being an abstract idea. Even the components of a single computer system, does not make the claims statutory because software instructions / algorithms are components of a computer system. Claim 11 does not correct the 101 problems either, because the claims state that the cited elements **can** includes these items. There is no definitive language within the claims language that the resources **are** these items. Therefore, As proper under M.P.E.P. 2111, the broadest possible interpretation of the claims would be that the items do not make up the resources. Similar reasons are made in regards to the apparatus claims, claims 23, 24, 26, 28-30, 32, and 33. In regards to claims 12, 13, 15, 17-19, 21 and 22, the same reason is made as detailed in the method claims with the following addition. The cited claims are computer-readable medium claims that according to the specification includes computer instructions signals embodied in a

transmission medium, such as the Internet. The Internet itself is an abstract communication concept. The physical structure that implements the concepts of the Internet would be considered a statutory concept, i.e. a plurality of computers wherein information is requested and shared. The preamble also details "when executed by a computer". This limitation is again not definitive of the invention being statutory. As proper under M.P.E.P. 2111, the broadest possible interpretation of this limitation would be that the are capable of being executed but aren't. Hence the claims are software instructions. Stating that the instructions are executed is different in that it is definitive that the instructions execute on the computer to perform the cited steps and thereby enabling.

***Claim Rejections - 35 USC § 112***

2. Claims 1, 2, 4-8, 10-13, 15-19, 21-24, 26-30, 32 and 33 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the relationship of the minimum and maximum requirements for a given resource to the collective requirements of the one or more resource pools. The cited steps establishes and use the requirement values for processing the overall allocating of resources. However, the cited requirement values have no relationship to one another as disclosed in the claims. It seems that one should exist but it is not evident in the claim language. Therefore, for further processing

of the claims the values would be considered to be distinct from one another. The examiner would like a clarification from Applicant and/or an amendment to the claims if this interpretation is incorrect.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 4-8, 10-13, 15-19, 21-24, 26-30, 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over UREVIG (U.S. Patent 6,154,787) in view of EILERT (U.S. Patent 6,587,938).

As to claim 1, UREVIG teaches a method for allocating computer system resources (resources, i.e. peripheral devices, memory, and or processing capacity) between concurrently executing workloads (data processing systems), comprising: establishing a first resource pool (via the STDM using a drive manager configuration utility) that specifies requirements (the pool defined by STDM fulfills the following requirements...) (col. 7, lines 52-62) for each of a plurality of different computer system resources (col. 8, lines 19-55), wherein the plurality of different computer system resources are components of a single computer system (peripheral devices typically associated with a computer system) (col. 5, lines 14-24), allocating the plurality of different computer system resources to one or more resource pools, including the first

resource pool, to create a resource allocation, wherein requirements of the first resource pool are satisfied (col. 7, lines 52-62; col. 8, lines 19-55), wherein prior to allocating the plurality of different computer system resources, verifying that collective requirements of the one or more resource pools (via the STDN fulfilling the requirements) can be satisfied (col. 7, lines 52-62; col. 8, lines 19-55) and wherein resources allocated to the first resource pool can change over time (col. 8, lines 19-24); and binding a first process (batch job) to the first resource pool, so that the first process has access to the plurality of different computer system resources allocated to the first resource pool (via the batch job requesting more resources that when handled by the STDN edits the pool files to the batch job) (col. 7, lines 1-7; col. 8, lines 19-55). However, UREVIG does not explicitly teach establishing minimum and maximum requirements for a given resource or if the collective requirements cannot be satisfied, signaling an error condition. UREVIG teaches that the verifying step is performed automatically by the STDN to check the requirements in order to create the pools. Official Notice is taken in that it is well known in the art that if an automatic operation encounters a problem an error is generated. Therefore, it would be obvious to one skilled in the art that should the requirements cannot be fulfilled that the pool would generate an error.

EILERT teaches a resource allocation algorithm wherein establishing the first resource pool involves establishing minimum and maximum requirements (priority values) for a given resource (via setting the priority values in order to perform I/O on an I/O resource) (col. 17, line 47 – col. 18, line 11) and dynamically changing the resource

allocation from one computing environment to another. It would be obvious to one of ordinary skill in the art that the data processing systems of UREVIG are the partitioned environments of EILERT. Therefore, it would be obvious to one of ordinary skill in the art to combine the teachings of UREVIG with the teachings of EILERT in order to facilitate the dynamically allocating of resources based on workload change requirements (col. 2, lines 23-59).

As to claim 2, EILERT teaches allocating the plurality of different computer system resources to one or more resource pools involves: partitioning each of the plurality of different computer system resources into one or more partitions (partitions), wherein a first partition (one partition) is associated with a first resource and a second partition (another partition) is associated with a second resource (col. 4, lines 18-27; col. 4, line 63 – col. 5, line 9); allocating the first partition to a single resource pool (logical partition group), so that only processes (applications) associated with the single resource pool can access the first partition; and allocating the second partition to multiple resource pools (other logical partition groups) so that processes (applications) associated with the multiple resource pools can share the second partition (col. 6, lines 10-66; col. 8, lines 15-20).

As to claim 4, UREVIG teaches establishing the first resource pool involves selecting a file containing a representation of the first resource pool from a plurality of

possible files (via the STDM using a drive manager configuration utility to create or modify a pool file) (col. 7, lines 52-62; col. 8, lines 19-55).

As to claim 5, UREVIG teaches storing a representation of the resource allocation to storage (file storage) so that the resource allocation can be reused (col. 8, lines 19-55). UREVIG teaches that the system is practiced on any computer for any number of reasons (col. 4, lines 55-67). Official Notice is taken in that it is well known in the art that files stored in a non-volatile computer memory system enable the system to data to be accessed in light of machine failure and therefore would be obvious in view of UREVIG in order to store resource allocation in light of all types of circumstances.

As to claim 6, UREVIG teaches storing the representation of the resource allocation involves storing a representation of each of the one or more resource pools (pools) along with associated resources (resources) (via the second or third pool file) (col. 9, lines 20-41).

As to claim 7, UREVIG teaches a number of source code expressions, in one of many computer languages, could be utilized to implement the present invention (col. 4, lines 55-61). Official Notice is taken in that XML is a well known programming language and therefore would be obvious in view of UREVIG in order to implement the resource allocation in XML.



As to claim 8, EILERT teaches wherein the first resource pool (resources associated with a logical partition group) is associated with a first project (logical partition); and wherein the first process is one of a plurality of processes (applications / programs) associated with the first project (via from the creation of logical partitions and the binding of these partitions into a group) (col. 4, lines 18-37).

As to claim 10, UREVIG teaches dynamically adjusting the resource allocation during system execution (col. 3, lines 8-10).

As to claim 11, UREVIG teaches the plurality of different computer system resources can include: central processing units; semiconductor memory; swap space; and networking resources (abstract; col. 2, lines 50-53).

As to claims 12, 13, 15-19, 21 and 22, reference is made to a computer readable medium that corresponds to the method of claims 1, 2, 4-8, 10 and 11 and is therefore met by the rejection of claims 1, 2, 4-8, 10 and 11 above.

As to claims 23, 24, 26-30, 32 and 33, reference is made to an apparatus that corresponds to the method of claims 1, 2, 4-8, 10 and 11 and is therefore met by the rejection of claims 1, 2, 4-8, 10 and 11 above.

### ***Response to Arguments***

1. Applicant's arguments filed 2/22/05 have been fully considered but they are not persuasive. Applicant argues that both Urevig teaches allocating external resources and Eilert teaches allocating physical resources within a computer system such that both does not teach establishing minimum and maximum sizes for resources, and controls the allocation of the resources within a single computing system based upon these minimum and maximum sizes. Applicant states that this is beneficial because it allows a single system to more efficiently allocate its resources based upon these minimum and maximum sizes. The examiner disagrees. The claims as amended state that the establishing of a first resource pool that specifies requirements for each of a plurality of different computer system resources, wherein the plurality of different computer system resources are components of a single computer system. There is no language stated in the claims that the method is operating on a computer system to allow it to more efficiently allocate its resources. The claims only detail that the resources are components of a single computer system. Therefore, one can interpret this to mean that the resources are components typically associated with a computer system. The claims can also be interpreted as taking components of a computer system to be allocated to partitions / environments on another system. Stating that a resource pool is established based on requirements wherein the resources are components of a single computer system does not automatically mean that the environment is a single computer system environment. It just means that the resources come from a single computer system. Both of the cited prior art of record teach that resources are allocated from a single computer system / environment. Some of the

prior art of record teach that this allocating establishes minimum and maximum requirements, i.e. priority requirements (EILERT, via setting the priority values in order to perform I/O on an I/O resource) (col. 17, line 47 – col. 18, line 11). As detailed in the 112 section above, the claims set forth no relationship between the minimum and maximum requirements to the collective requirements. Therefore, it is the examiner's interpretation that these are distinct values. As indicated in the action above, the combination teaches allocating the resources based on verifying the collective requirements of the resource pool to be satisfied. Therefore, the combination adequately teaches the claim limitations as disclosed above.

### ***Conclusion***

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis A. Bullock, Jr. whose telephone number is (571) 272-3759. The examiner can normally be reached on Monday-Friday, 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 16, 2005

  
**LEWIS A. BULLOCK, JR.**  
**PRIMARY EXAMINER**